

What is claimed is:

1. Isolated RTD polypeptide having at least about 80% amino acid sequence identity with native sequence RTD polypeptide comprising amino acid residues 1 to 386 of Fig. 1A (SEQ ID NO:1).

2. The RTD polypeptide of claim 1 wherein said RTD polypeptide has at least about 90% amino acid sequence identity.

3. The RTD polypeptide of claim 2 wherein said RTD polypeptide has at least about 95% amino acid sequence identity.

4. Isolated native sequence RTD polypeptide comprising amino acid residues 1 to 386 of Fig. 1A (SEQ ID NO:1).

5. Isolated RTD polypeptide comprising amino acid residues 56 to 386 of Fig. 1A (SEQ ID NO:1).

6. Isolated extracellular domain sequence of RTD polypeptide comprising (a) amino acid residues 56 to 212 of Fig. 1A (SEQ ID NO:1); or (b) fragments of the sequence of (a) which retain biological activity of a native sequence RTD polypeptide.

7. The extracellular domain sequence of claim 6 comprising amino acid residues 1 to 212 of Fig. 1A (SEQ ID NO:1).

8. Isolated extracellular domain sequence of RTD polypeptide comprising amino acid residues 99 to 139 of Fig. 1A (SEQ ID NO:1).

9. The extracellular domain sequence of claim 8 further comprising amino acid residues 141 to 180 of Fig. 1A (SEQ ID NO:1).

10. A chimeric molecule comprising a RTD polypeptide fused to a heterologous amino acid sequence.

11. The chimeric molecule of claim 10 wherein said RTD polypeptide

comprises an extracellular domain sequence.

12. The chimeric molecule of claim 10 wherein said heterologous amino acid sequence is an epitope tag sequence.

13. The chimeric molecule of claim 10 wherein said heterologous amino acid sequence is an immunoglobulin sequence.

14. The chimeric molecule of claim 13 wherein said immunoglobulin sequence is an IgG.

15. An antibody which specifically binds to a RTD polypeptide.

16. The antibody of claim 15 wherein said antibody is a monoclonal antibody.

17. The antibody of claim 15 which is an agonist antibody.

18. The antibody of claim 15 which comprises a chimeric antibody.

19. The antibody of claim 15 which comprises a human antibody.

20. Isolated nucleic acid comprising a nucleotide sequence encoding the RTD polypeptide of claim 1 or the extracellular domain sequence of claim 6.

21. The nucleic acid of claim 20 wherein said nucleotide sequence encodes native sequence RTD polypeptide comprising amino acid residues 1 to 386 of Fig. 1A (SEQ ID NO:1).

22. A vector comprising the nucleic acid of claim 20.

23. The vector of claim 22 operably linked to control sequences recognized by a host cell transformed with the vector.

24. A host cell comprising the vector of claim 22.

25. The host cell of claim 24 which comprises a CHO cell.

5 26. The host cell of claim 24 which comprises a yeast cell.

27. The host cell of claim 24 which comprises *E. coli*.

10 28. A process of using a nucleic acid molecule encoding RTD polypeptide to effect production of RTD polypeptide comprising culturing the host cell of claim 24.

15 29. A composition comprising RTD polypeptide and a carrier.

30 30. A non-human, transgenic animal which contains cells that express nucleic acid encoding RTD polypeptide.

31. The animal of claim 30 which is a mouse or rat.

35 32. A non-human, knockout animal which contains cells having an altered gene encoding RTD polypeptide.

36 33. The animal of claim 32 which is a mouse or rat.

40 34. An article of manufacture, comprising a container and a composition contained within said container, wherein the composition includes RTD polypeptide or RTD antibodies.

45 35. The article of manufacture of claim 34 further comprising instructions for using the RTD polypeptide or RTD antibodies *in vivo* or *ex vivo*.

50 36. A method of modulating apoptosis in mammalian cells comprising exposing said cells to RTD polypeptide.

37. The method of claim 36 wherein said cells are also exposed to Apo-2 ligand.

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